

Title (en)
METHOD FOR PRODUCING SEAMLESS STEEL PIPE

Title (de)
VERFAHREN ZUR HERSTELLUNG EINES NAHTLOSEN STAHLROHRS

Title (fr)
PROCÉDÉ POUR PRODUIRE UN TUYAU EN ACIER SANS SOUDURE

Publication
EP 2415884 A4 20170510 (EN)

Application
EP 10758724 A 20100330

Priority
• JP 2010055713 W 20100330
• JP 2009082700 A 20090330

Abstract (en)
[origin: EP2415884A1] There is provided a method for manufacturing seamless steel pipes in which a billet consisting of, by mass percent, C: 0.15 to 0.35%, Si: 0.05 to 0.5%, Mn: 0.1 to 1.5%, Cr: 0.2 to 1.5%, Mo: 0.1 to 1.5%, Ti: 0.005 to 0.50%, and Al: 0.001 to 0.50%, the balance being Fe and impurities, the impurities having a composition of 0.1% or less of Ni, 0.04% or less of P, 0.01% or less of S, 0.01% or less of N, and 0.01% or less of O, is hot pierced and hot rolled, and further heat treatment is performed, wherein a hot rolled steel pipe is direct quenched from a temperature of not lower than the Ar 3 transformation point; subsequently, the steel pipe is subjected to heat treatment at a temperature of not lower than 450°C and not higher than the Ac 1 transformation point in heat treatment equipment connected to a quenching apparatus for performing the direct quenching; and further the steel pipe subjected to the heat treatment is reheated, quenched from a temperature of not lower than the Ac 3 transformation point, and tempered at a temperature of not higher than the Ac 1 transformation point. The occurrence of delayed fracture such as shock cracking and storage cracking can be suppressed without an adverse influence on the product performance.

IPC 8 full level
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CPC (source: EP US)
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• [A] EP 0828007 A1 19980311 - SUMITOMO METAL IND [JP]
• [A] JP S6086208 A 19850515 - SUMITOMO METAL IND
• See references of WO 2010113953A1

Cited by
EP3018229A4; EP2581463A4; EP3208358A4; EP3418410A4; EP3760754A4; US9175371B2; US10562085B2; US10752979B2

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